

REMARKS

Claims 1-18 are pending in the present application. Of these, claims 1-5, 7-11 and 13-18 have been examined, and claims 6 and 12 have been withdrawn from consideration due to a restriction requirement.

Applicant wishes to thank the Examiner for the indication of allowance of claims 8-11 and 13, and the indication of allowable subject matter in claim 3. Applicant respectfully submits, however, that claims 1, 2, 4, 5, 7 and 14-18 are also patentable for the reasons set forth below.

Claims 1, 2, 4, 5, 7 and 14-18 stand rejected under 35 U.S.C. §102(a) as being anticipated by U.S. Patent No. 6,714,089 to Ammar et al. or U.S. Patent No. 6,535,072 to Yamashita et al. Applicant respectfully traverses this rejection.

The present invention as defined in independent claim 1 is directed to an oscillator structure that includes “an oscillator for oscillating at a specific frequency determined by a control voltage signal in a predetermined frequency modulation range” and “a resonator coupled with a line transferring the oscillation signal of the oscillator, for resonating at a frequency out of the predetermined frequency modulation range.”

Similarly, the present invention as defined in independent claim 14 is directed to an oscillation method that includes “outputting an oscillation signal” and “transferring the oscillation signal to a resonator so as to excite the resonator.”

With the oscillator and oscillation method of claims 1 and 14, respectively, because the oscillation signal of the oscillator is transferred to a resonator, a more

simplified structure than that of the cited prior art is used to stabilize the frequency of the oscillator.

Applicant respectfully submits that Ammar et al. does not teach or suggest the present invention as defined in independent claims 1 and 14.

The Office Action contends that element 52 of Fig. 3 of Ammar et al. is a dielectric resonator. This, however, is incorrect. Element 52 is clearly described by Ammar et al. as being a "free running DRO," *i.e.*, an oscillator. As is known in the art, and described in Ammar et al. at col. 6, lines 33-44, a free running DRO includes many additional elements such as a resonant circuit for driving the DRO, a negative resistance circuit including an FET, a mixer, and many matching networks. Accordingly, Ammar et al. does not teach or suggest the present invention as defined in independent claims 1 and 14.

Applicant respectfully submits that Yamashita et al. also does not teach or suggest the present invention as defined in independent claims 1 and 14.

The Office Action contends that element 1 of Figs. 1A and 1B of Yamashita et al. is a voltage controlled oscillator. This, however, is incorrect. Element 1 of Figs. 1A and 1B is only an FET, and it would be technically inaccurate to regard one FET as a VCO. Many additional elements would be required, such as a varactor, to form a VCO with an FET.

As specifically described in Yamashita et al., it is a variable reactance element 2 that operates as the VCO. See col. 3, lines 13-19 of Yamashita et al. In other words, the

oscillation frequency in Yamashita et al. is determined based on the changes of the resonant frequency of the resonant circuit.

In addition, Yamashita et al. neither teaches nor suggests that the resonant frequency of the resonant circuit of the VCO is set to a frequency of the oscillation frequency range as required by independent claims 1 and 14. The present invention, however, has the resonant frequency of the resonant circuit set to a frequency of the oscillation frequency range, and is thus made stable as shown in Figs. 3 and 4, for example.

In contrast, according to Yamashita et al. at col. 3, lines 20-24, a switch 19 is ON when the VCO operates and the switch 19 is OFF when detecting failures. Therefore, when the VCO operates, detection is not possible and when detection is performed, DRO operates. In such a structure of Yamashita et al. it would be impossible to generate a control voltage signal as required by independent claims 1 and 14.

Moreover, with the present invention as defined in independent claim 1, additional elements such as a level detector and a control circuit are added to the oscillator. Thus, Yamashita et al. can not anticipate claim 1. Likewise, with the present invention as defined in independent claim 14, additional steps generating a control voltage signal and using the control voltage signal to compensate the oscillation signal are included. Thus, Yamashita et al. can not anticipate claim 14.

Accordingly, Yamashita et al. does not teach or suggest the present invention as defined in independent claims 1 and 14.

Claims 2, 4, 5 and 7 depend directly from independent claim 1 and include all of the limitations found therein. Claims 15-18 depend directly from independent claim 14 and include all of the limitations found therein. Each of these dependent claims includes additional limitations which, in combination with the limitations of the claims from which they depend, are neither disclosed nor suggested in the art of record. Accordingly, claims 2, 4, 5, 7 and 15-18 are likewise patentable.

In addition, Applicant wishes to note that withdrawn claims 6 and 12 depend from claims 1 and 8, respectively. As independent claim 1 is shown to be allowable as set forth above, and claim 12 depends directly from allowed claim 8, it is respectfully requested that these claims be considered and allowed along with independent claims 1 and 12.

In view of the foregoing, favorable consideration and allowance of the present application with claims 1-18 is respectfully and earnestly solicited.

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Respectfully submitted,
By Richard LaCava
Richard LaCava
Registration No.: 41,135
DICKSTEIN SHAPIRO MORIN &
OSHINSKY LLP
1177 Avenue of the Americas
41st Floor
New York, New York 10036-2714
(212) 835-1400
Attorney for Applicant